ELSEVIER

Volume 242, Numbers 1–2, 15 September 1996

Journal of ALLOYS AND COMPOUNDS

Contents

Letters

Isothermal section of the Nd–Fe–Si system at 870 K L1
P.S. Salamakha (L'viv, Ukraine), J. Stępeń-Damm, O. Bodak (Wroclaw, Poland)

Crystal structure of the $Nd_5Ru_{0.75}Si_{2.25}$ compound L3
P.S. Salamakha (L'viv, Ukraine), J. Stępeń-Damm (Wroclaw, Poland), Yu. Ptots', O. Bodak (L'viv, Ukraine)

Magnetic properties of $Y(Co_{1-x}Ni_x)_4Al$ compounds L5
E. Burzo, S. Bodea, D. Pop, V. Pop (Cluj-Napoca, Romania), R. Ballou (Grenoble, France), G. Borodi (Cluj-Napoca, Romania)

Chemistry

Synthesis and crystal structure of a new samarium borosilicate compound $Sm_3BSi_2O_{10}$ 1
L. Chi, H. Chen, S. Deng, H. Zhuang, J. Huang (Fuzhou, People's Republic of China)

A simple solution route to the synthesis of pure $La_2Ti_2O_7$ and $Nd_2Ti_2O_7$ at 700–800°C by polymerized complex method 6
M.M. Milanova, M. Kakihana, M. Arima, M. Yashima, M. Yoshimura (Yokohama, Japan)

Synthesis, oxygen occupation, and properties of the κ-phases $Hf_9Mo_4SO_x$ and $Hf_9W_4SO_x$ 11
H. Kleinke, K.M. Kleinke, H.F. Franzen (Ames, IA, USA)

Crystal structure of the compound $Y_{0.5}Er_{0.5}AlO_3$ 18
L. Vasylechko, L. Akselrud (Lviv, Ukraine), A. Matkovskii (Lviv, Ukraine and Rzeszow, Poland), D. Sugak, A. Durygin (Lviv, Ukraine), Z. Frukacz, T. Lukasiewicz (Warsaw, Poland)

Mechanical milling of auriferous arsenopyrite and pyrite 22
M.G. Aylmore, F.J. Lincoln (Nedlands, Australia)

Synthesis and characterization of the $BiRESr_2O_6$-type ternaries (RE = La and lanthanides) 35
R. Horyń, M. Wołcyrz, A. Wojakowski, A.J. Zaleski (Wrocław, Poland)

Physics

Periodicity in the band gap variation of Ln_2X_3 (X = O, S, Se) in the lanthanide series 41
A.V. Prokofiev, A.I. Shelykh, B.T. Melekh (St. Petersburg, Russia)

Crystal structure of $Ce_2Mn_7Al_{10}$ determined by neutron diffraction 45
O. Moze (Parma, Italy), K.H.J. Buschow (Amsterdam, Netherlands)

The formation of epitaxial YH_2 in MBE grown yttrium thin films with a thin gold capping layer 49
A.R. Wildes, R.C.C. Ward, M.R. Wells (Oxford, UK), B. Hjörvarsson (Uppsala, Sweden)

X-ray emission spectra and electron structure of RM_2Si_2 (R = Sc, Y; M = Fe, Co, Ni, Cu) compounds 58
I.D. Shcherba (L'viv, Ukraine), V.M. Antonov (Kyiv, Ukraine), B.Ya. Kotur (L'viv, Ukraine)

Structure and magnetic properties of $Y_2Fe_{17-x}Mn_x$ compounds (x = 0–6) 66
Y.-g. Wang (Beijing and Hangzhou, People's Republic of China), F. Yang (Beijing, People's Republic of China), C. Chen (Hangzhou, People's Republic of China), N. Tang (Beijing, People's Republic of China), H. Pan (Beijing and Hangzhou, People's Republic of China), Q. Wang (Hangzhou, People's Republic of China)

A.c. magnetic susceptibility studies on the $Dy_{0.73}Tb_{0.27}Fe_{2-x}Ni_x$ and $Ho_{0.85}Tb_{0.15}Fe_{2-y}Ni_y$ intermetallics 70
M. Senthil Kumar, K.V. Reddy, K.V.S. Rama Rao (Madras, India)

Precise crystal and magnetic structure determinations. Part I: a neutron diffraction study of $Nd_2Fe_{14}B$ at 20 K 74
P. Wolfers, S. Obbade, D. Fruchart (Grenoble, France), R. Verhoef (Amsterdam, The Netherlands)

A precise crystal structure determination. Part II: an X-ray four-circle study of $Nd_2Fe_{14}B$ at 20 and 290 K 80
S. Obbade, P. Wolfers, D. Fruchart, R. Argoud, J. Muller (Grenoble, France), E. Palacios (Grenoble, France and Zaragoza, Spain)

Elsevier Science S.A.

The effect of mechanical milling on the structure and magnetic properties of Fe_2Sc Laves phase 85
S.K. Xia, E. Baggio-Saitovitch, V.A. Rodriguez, E. Passamani, A.Y. Takeuchi (Rio de Janeiro, Brazil), M. Ghfari (Darmstadt, Germany), R.R. Avillez, F.C. Rizzo Assunção (Rio de Janeiro, Brazil)

Crystal and magnetic structures of $RCoC_2$ (R = Nd, Er, Tm) 90
P.A. Kotsanidis, J.K. Yakinthos (Xanthi, Greece), W. Schäfer (Bonn, Germany)

Structure and superconductivity of $YBa_2Cu_{3-x}Sn_xO_7$ 95
L.F. Li, Z. Zhang (Beijing, People's Republic of China), G.F. Zhou, F.R. de Boer (Amsterdam, Netherlands)

Materials Science

Alloying effects on the electronic structure of Mg_2Ni intermetallic hydride 98
Y. Takahashi, H. Yukawa, M. Morinaga (Aichi, Japan)

Production of Co–Ni alloys by mechanical-alloying 108
L. Aymard, B. Dumont (Amiens, France), G. Viau (Paris, France)

Structure and magnetostriction of $(Dy_{0.6}Tb_{0.3}Pr_{0.1})(Fe_{0.95-x}Mn_{0.05}Ga_x)_{1.85}$ alloys 114
S.L. Tang, C.H. Wu, X.M. Jin, B.W. Wang (Shenyang, People's Republic of China), Y.C. Chuang (Shenyang and Guangzhou, People's Republic of China), J.Y. Li, X.G. Zhao (Beijing, People's Republic of China)

Phase relations in the system La_2O_3–B_2O_3–P_2O_5 118
Y. Shi (Beijing, People's Republic of China), J. Liang (Beijing and Shenyang, People's Republic of China), Y. Guo, J. Yang, W. Zhuang, R. Guanghui (Beijing, People's Republic of China)

Empirical determination of bulk moduli of elemental substances by pseudopotential radius 122
Y. Makino (Osaka, Japan)

Origin of magnetic anisotropy formation in the HDDR-process of $Nd_2Fe_{14}B$-based alloys 129
T. Tomida, P. Choi, Y. Maehara (Amagasaki, Japan), M. Uehara, H. Tomizawa, S. Hirosawa (Osaka, Japan)

Metallurgy

Metastable Ti–Al phases obtained by mechanical alloying 136
K.B. Gerasimov, S.V. Pavlov (Novosibirsk, Russia)

A microcalorimetric investigation of the thermodynamics and kinetics of hydriding–dehydriding reactions 143
W. Zhang, M.P. Sridhar Kumar, A. Visintin, S. Srinivasan (College Station, TX, USA), H.J. Ploehn (Columbia, SC, USA)

Amorphization of Fe–Nb by mechanical alloying 153
J.Y. Yang, T.J. Zhang, K. Cui, X.G. Li, J. Zhang (Wuhan, People's Republic of China)

Structure of liquid alloys of transition metals and semimetals 157
M. Komarnytsky, S. Mudry, V. Halchak (L'viv, Ukraine)

Author Index of Volume 242 161

Subject Index of Volume 242 163

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.